

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 2691**  
Pascal DAGUIER et al. : Attorney Docket No. 2006\_1570A  
Serial No. 10/593,463 : Group Art Unit 1793  
Filed September 19, 2006 : Examiner Mark L. Shevin  
  
STEEL FOR MECHANICAL PARTS, : **Mail Stop: AF**  
METHOD FOR PRODUCING  
MECHANICAL PARTS FROM SAID STEEL  
AND THE THUS OBTAINABLE  
MECHANICAL PARTS

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**DECLARATION UNDER RULE 1.132**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants herein provide a declaration under Rule 1.132. Applicants respectfully submit that the declaration, signed by one of the inventors in the present application, presents additional evidence for the patentability of the present application. Applicants respectfully request that the content of the declaration be thoroughly considered in assessing the patentability of the present application.

Respectfully submitted,

Pascal DAGUIER et al.

/Stephen W. Kopchik/  
2010.02.12 12:25:46 -05'00'  
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## DECLARATION FROM AN INVENTOR TO THE USPTO

Re : US Patent Application 10/593,463

Hagondange, January 19th, 2010

Dear Sirs,

We ask you, by the present letter, to consider the following remarks :

The drawing of the application is wrong : the letters assigned to the curves do not correspond to the letters of the samples on table 1.

Reference sample A on table 1 corresponds to curve G of the drawing  
Reference sample B on table 1 corresponds to curve F of the drawing  
Reference sample C on table 1 corresponds to curve C of the drawing  
Reference sample D on table 1 corresponds to curve D of the drawing  
Sample E according to the invention corresponds to curve A of the drawing  
Sample F according to the invention corresponds to curve B of the drawing  
Sample G according to the invention corresponds to curve E of the drawing


Taking into account this first remark, the text of the application is more understandable and it appears clearly that the Jominy curves of the steels of the invention are flattest than those of the reference steels, deprived of any inflexion point.

To illustrate the effect of the Jominy curves on the steel properties, we conducted heat treatments on gear shafts in order to measure the residual deformation after heat treatment (carburizing under low pressure and gas quenching) of the steel of the invention E and of the reference steel A.

The illustration given in the added figure shows that the steel of the invention E allows to obtain, after heat treatment, a residual deformation less pronounced and less scattered than the reference steel A when heat treated in the same conditions. The residual deformation lies between 0 and 40  $\mu\text{m}$  while for the reference steel, the measured deformation lies between 0 and 100  $\mu\text{m}$ . Softer quenching (oil quenching), did not allow to minimise the residual deformation of the reference steel as it was obtained with the invention steel under hard quenching conditions. The influence of the Jominy curve (the chemical composition needed to obtain such a Jominy curve) is real and measurable. This added argument shows that the concept explained in EP 0890653 is applicable in these examples, modified by the chemical composition explained in the different claims of the application.

We are aware that false statements from our parts would expose us to legal procedure. Considering this, we would be very pleased if you could re-examine the content of this application, in view of above statements.

Yours faithfully.



Pascal DAGUIER

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